



UNITED STATES PATENT AND TRADEMARK OFFICE

clo

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/289,168	04/09/1999	KAZUNORI SAIDA	4041J000216	8291
27572	7590	04/22/2004	EXAMINER	
HARNESSE, DICKEY & PIERCE, P.L.C.			FORD, JOHN K	
P.O. BOX 828			ART UNIT	
BLOOMFIELD HILLS, MI 48303			PAPER NUMBER	
			3753	

DATE MAILED: 04/22/2004

29

Please find below and/or attached an Office communication concerning this application or proceeding.

0929

Office Action Summary

Application No.

09/289,168

Applicant(s)

Saida et al.

Examiner

FORD

Art Unit

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1-15-04
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 31-37 and 45-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 31-37 and 45-47 is/are allowed.
- 6) ☒ Claim(s) 40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

Applicant's response has been studied carefully.

Claims 31-37 and 45-47 are allowed. Claim 48 is rejected below. To expedite allowance of this application the Examiner would suggest canceling claim 48. Given the allowance of claim 31, claim 48 appears somewhat redundant.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 48 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Examiner doesn't understand what the new limitation "said cooling heat exchanger is disposed to approximately contact said case at an immediate upper position of said air inlet" is supposed to mean. The heat exchanger 21 appears to be in contact with a wall extending inwardly from the case above tank position 21d. Is that what is being claimed? If not, what is? Applicant's remark on page 11, "New claims" last sentence do not shed much light on the last three clauses of claim 48. The limitation "said case has an end peripheral portion for defining said air inlet on an upper side" appears to conflict with the earlier recitation, in claim 48, that the air inlet introduces air into the lower space under said cooling heat exchanger. Mutually contradictory limitations render the claim vague. The Examiner doesn't understand what structure in Figure 3 constitutes the "end peripheral portion". Is this some part of the bottom portion 20c? The specification offers no guidance on what structure constitutes the "end

Art Unit: 3753

peripheral portion." Because of this ambiguity the last clause in claim 48 is also ambiguous.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kujrai et al. (5,715,705) in view of Todd (3,008,694).

Kujrai in Figure 7 shows a cooling heat exchanger 10 with a fan inlet 322 that feeds air into the casing at a point immediately below the center of the heat exchanger 10 and not below the tank portions 1a or 1b. Note the heat exchanger 10 shown in Figure 7 can, in alternative embodiments shown in Figures 9B and 9c, be tilted. While the tubes in Kujrai are not explicitly illustrated, it is submitted that those of ordinary skill would know that the tubes extend perpendicularly to the axis of tanks 1a and 1b (i.e. the tubes are in the plane of the paper, Figure 7).

In the event, such were not known, it is fairly taught by Todd, which if necessary, is relied upon to show tubes oriented to the fan as claimed. Todd also teaches, very clearly, in Figures 10 and 11, fan discharges 44 into the plenum below heat exchanger 48 that are not near the extreme ends of the heat exchanger core 48 but rather discharge air more toward the central portion of the heat exchanger. To have oriented, in Kujrai, the fan inlet 322 toward the center of the portion of heat exchanger 10 in the modifications of Figure 7 shown in Figures 9B or 9C, away from tanks 1a and 1b, would

Art Unit: 3753

have been obvious to prevent condensate problems and secure good distribution of air flow across the lower face of the heat exchanger.

Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art as applied to claims 48 above, and further in view of JP 8-104129 or JP 7-35496.

JP'129 teaches at 21K (see Figs. 10 and 13) structures that prevent direct air flow under the tank portion of an evaporator to prevent disturbing the condensed water. Similarly JP '496 teaches structures 11 at the extreme ends of an evaporator core of preventing air flow at the ends, which would lead to blowing condensed water into the compartment.

In view of the teachings of either of these latter two references it would have been obvious to oriented the fan discharge in the sidewall of the casing of Kujrai/Todd away from the areas where the condensate has a tendency to collect and where air flow would tend to blow such condensate around.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

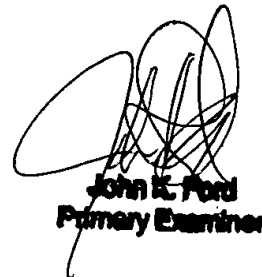
Art Unit: 3753

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication should be directed to John Ford at telephone number 308-2636.

Ford/DI

April 5, 2004



John E. Ford
Primary Examiner